

Reducing the environmental impact of road transport

We need to find the balance between cutting emissions and preserving the industry's viability

The road transport industry has already made significant progress by investing in operational efficiency, energy efficient technologies and lower carbon fuels.

But there is no question that we need to reduce the amount of carbon dioxide we pump into the world's atmosphere. Transport provides around 23% of all CO₂ emissions and, while road transport is only a part of that, we can do more.

Commercial road transport operators also have an inherent interest in reducing their fuel consumption: it currently accounts for 30% of their costs.

It's important to remember that commercial road transport is the backbone of the global economy. If expensive measures were imposed without a proven business case it would drive prices up and even put haulage companies out of business, which in turn would have an immediate negative impact on businesses and ultimately consumers.

There is a lot to do and we can get there if the industry works together with vehicle manufactures, fuel suppliers, and regulators.

The largest share of transport emissions comes from cars. Promoting transport by bus and coach is one of the most effective ways to decarbonise road transport: one full bus removes 30 cars, decreasing congestion and increasing road safety.

With demand for passenger services set to double globally by 2050, primarily in non-OECD countries, collective transport will play an important role in the shift away from car use. This is important in the developed world, and even more so in the developing world. It is essential to avoid building a dependency on private car use.

Decarbonisation of road transport will rely on five key pillars:

1) Vehicle technologies

Improving vehicle energy efficiency is having a significant impact, from low-rolling resistance tyres, to engine efficiency improvements, aerodynamics, waste-heat recovery and weight reduction.

It's also important to focus on the entire lifecycle of both the vehicle and its fuel. What is the environmental cost of manufacturing an electric vehicle? How is the power generated? Just looking at operational performance is not comprehensive enough.

2) Alternative fuels

Energy from renewable sources will, in due course, replace fossil fuels. A range of alternative fuels will be needed depending on the vehicle type, operation, mission and the region.

However, long-haul transport is likely to need fossil fuels for some time, so we need to continue improving the internal combustion engine. Liquified natural gas vehicles, and in the longer term hydrogen fuel cell vehicles, currently seem to be the most promising alternatives for long haul, with pure battery-electric vehicles being the best option for urban and regional distribution.

3) Operational measures

Operators have to work in the most cost effective way to remain profitable so are always looking to be as efficient as possible. There are a number of tools at their disposal: improving load factor optimisation, digitalisation and more use of collaborative transport platforms are three examples.

High capacity vehicles (HCVs), two of which have the same capacity as three normal trucks, present significant opportunities for reducing CO2 emissions. Intelligent Transport Systems (ITSs) can improve route optimisation. And reduced maximum driving speeds, relaxed delivery windows and carbon footprinting to track and reduce fuel consumption can also contribute.

4) Collective transport

The wider use of collective passenger transport will help reduce road transport fuel consumption.

5) Driver behaviour

Eco-driver training is a quick win for fuel reduction, potentially reducing emissions by eight per cent.



Eco-training

It is a simple win and involves simple procedures such as increased use of driver assistance tools and ITSs. Some companies and countries are leading the way but there is a lot more potential: a recent Transport Workers' Federation survey showed eco-training uptake is below 50%.

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